

State of California
AIR RESOURCES BOARD

EXECUTIVE ORDER U-R-6-50
Relating to Certification of New Off-Road Compression-Ignition Equipment Engines

ISUZU MOTORS LIMITED

Pursuant to the authority vested in the Air Resources Board (Board) by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-9;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and exhaust emission control system produced by the manufacturer are certified as described below for use in off-road equipment:

Model Year: 2001

Typical Equipment Usage: Crane, Loader, Tractor and Other Industrial Equipment

Fuel Type: Diesel

<u>Engine Family</u>	<u>Engine Displacement (liters)</u>	<u>Useful Life (hours)</u>	<u>Exhaust Emission Control Systems and Special Features</u>
1SZXL02.8CNA	2.8	8000	Direct Diesel Injection

Engine models and codes are listed on attachments. Production engines shall be in all material respects the same as those for which certification is granted.

The exhaust emission certification standards and certification values for total hydrocarbons (THC), carbon monoxide (CO), oxides of nitrogen (NOx), and particulate matter (PM) (units are expressed in grams per kilowatt-hour (g/kw-hr)), and the opacity-of-smoke certification standards and certification values in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family are as follows (Title 13, California Code of Regulations, Section 2423, as amended by Board approval on January 28, 2000):

<u>Engine Power Rating (kw)</u>	<u>Emission Standard Category</u>		<u>Exhaust Emissions (g/kw-hr)</u>				<u>Smoke Opacity (%)</u>		
			<u>THC</u>	<u>CO</u>	<u>NOx</u>	<u>PM</u>	<u>Accel</u>	<u>Lug</u>	<u>Peak</u>
37≤KW<75	Tier 1	Standard	N/A	N/A	9.2	N/A	20	15	50
		Certification	--	--	8.3	--	3	3	6

BE IT FURTHER RESOLVED: That the listed engine models with rated power equal to or greater than 19 KW but less than 130 KW are **conditionally certified** to, and shall be required to comply with, all amendments to Title 13, California Code of Regulations, Sections 2420 through 2427 adopted by the Board on January 28, 2000 at its hearing "TO CONSIDER AMENDMENTS TO OFF-ROAD COMPRESSION-IGNITION ENGINE REGULATIONS: 2000 AND LATER EMISSION STANDARDS, COMPLIANCE REQUIREMENTS AND TEST PROCEDURES." The listed engine models comply with all such amendments, including, but not limited to:

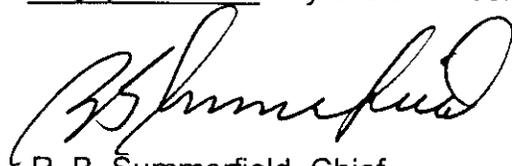
- the amended "Emission Control Labels—1996 and Later Off-Road Compression-Ignition Engines" (Title 13, California Code of Regulations, Section 2424) for the aforementioned model year;
- the Board's amended emission control system warranty provisions (Title 13, California Code of Regulations, Sections 2425 and 2426) for the listed engine models, as demonstrated by materials submitted by the manufacturer; and
- new California requirements for the Selective Enforcement Audit (SEA) for the listed engine models, as demonstrated by the manufacturer's submission of materials.

BE IT FURTHER RESOLVED: That the conditional certification described in the paragraph above is conditioned on the amendments being approved by the California Office of Administrative Law (OAL) pursuant to Government Code Section 11349.3, and where necessary, authorized by the Administrator of the U.S. Environmental Protection Agency (U.S. EPA) pursuant to Section 209(e)(2) of the Federal Clean Air Act. In the event that the OAL disapproves the amendments or the U.S. EPA decides not to authorize them, the conditional certification herein of the listed engine models with rated power equal to or greater than 19 KW but less than 130 KW shall be deemed null and void.

The conditional certification described herein is not conditioned on further U.S. EPA action on amendments determined by the Board to be within the scope of an existing U.S. EPA authorization.

Engines certified under this Executive Order must conform to the above requirements under Title 13, California Code of Regulations, Chapter 9, Article 4, and all other applicable California emission laws and regulations.

Executed at El Monte, California this 28th day of December 2000.



R. B. Summerfield, Chief
Mobile Source Operations Division

ATTACHMENT

Engine Model Summary Form

Manufacturer: **Isuzu Motors Limited**
 Engine category: **Nonroad CI**
 EPA Engine Family: **1SZXL02.8CNA**
 Mfr Family Name: **NA**
 Process Code: **New Submission**

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1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesels only)	6.Torque @ RPM (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	9.Emission Control Device Per SAE J1930
4JB1NAACA-01	A-4JB1	61.8@2600	41.0@2600	23.7@2600	140.1@1800	45.4@1800	18.2@1800	EM,DFI
4JB1NAACA-02	A-4JB1	54.8@2100	44.0@2100	20.6@2100	140.1@1800	45.4@1800	18.2@1800	EM,DFI
4JB1NAACA-03	A-4JB1	55.9@2600	36.6@2600	21.1@2600	126.0@1800	39.3@1800	15.8@1800	EM,DFI
4JB1NAACA-04	A-4JB1	50.5@2100	39.6@2100	18.5@2100	126.0@1800	39.3@1800	15.8@1800	EM,DFI
4JB1NAACA-05	A-4JB1	68.9@3000	41.0@3000	27.4@3000	140.1@2000	45.4@2000	20.2@2000	EM,DFI
4JB1NAACA-06	A-4JB1	66.4@2700	42.6@2700	25.6@2700	140.1@2000	45.4@2000	20.2@2000	EM,DFI
4JB1NAACA-31	A-4JB1	56.4@2400	39.3@2400	21.0@2400	135.6@1800	41.2@1800	15.6@1800	EM,DFI
4JB1NAACA-32	A-4JB1	56.3@2300	37.9@2300	19.4@2300	138.2@1800	41.8@1800	16.7@1800	EM,DFI
4JB1NAACA-33	A-4JB1	58.8@2600	39.0@2600	22.6@2600	134.7@1800	40.1@1800	16.1@1800	EM,DFI
4JB1NAACA-34	A-4JB1	52.6@2100	42.0@2100	19.6@2100	137.3@1600	41.8@1600	14.9@1600	EM,DFI
4JB1NAACA-35	A-4JB1	51.8@2200	39.2@2200	18.7@2200	137.3@1600	41.8@1600	14.9@1600	EM,DFI
4JB1NAACA-36	A-4JB1	54.8@2500	41.5@2500	23.1@2500	137.3@1600	41.8@1600	14.9@1600	EM,DFI
4JB1NAACA-37	A-4JB1	59.1@2450	40.4@2450	22.0@2450	135.5@1800	41.2@1800	16.5@1800	EM,DFI